

**ABSTRACT**

A method for high spatial resolution imaging of a plurality of sources of x-ray and gamma-ray radiation is provided. High quality diffracting crystals of 1mm width are used for focussing the radiation and directing the radiation to an array of detectors which is used for analyzing their addition to collect data as to the location of the source of radiation. A computer is used for converting the data to an image. The invention also provides for the use of a multi-component high resolution detector array and for narrow source and detector apertures.